



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,564	10/08/2004	Michiyuki Sugino	1152-0310PUS1	9017
2292 7590 10/19/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MOON, SEOKYUN	
			ART UNIT 2629	PAPER NUMBER
			NOTIFICATION DATE 10/19/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/510,564	Applicant(s) SUGINO, MICHYUKI	
	Examiner Seokyun Moon	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/29/07&9/17/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remark

1. Prior to the discussion regarding the Applicants' arguments, the Examiner respectfully submits that the subject matter of the instant Application might be different or distinguishable from the prior arts of record, but such subject matter is not presented and/or disclosed in the claims specifically enough to distinguish the instant invention from the prior arts of record.

Response to Arguments

2. The Applicants' arguments with respect to the difference in the number of table memories have been considered but are moot in view of the new ground(s) of rejection.

3. The Applicants' arguments with respect to the difference in the detection timing of the temperature have been fully considered but they are not persuasive.

The amended claims fail to teach specifically regarding the timing of detecting temperatures.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 2002/0140652).

As to **claim 1**, Suzuki teaches a liquid crystal display for image display using a liquid crystal display panel [par. (0011)], comprising:

Art Unit: 2629

a write-gray scale level determining section (a combination of “*interpolation calculation units 34 and 44*” and “*post drive level calculation units 36 and 46*”) [fig. 3] for determining write-gray scale level data for input image data that compensates an optical response characteristic of the liquid crystal display panel, in accordance with, at least, a combination of gray scale level transitions from a previous vertical display period to a current vertical display period [par. (0053) lines 11-17 and pars. (0045) and (0046)];

an achievable gray scale level determining section (a combination of “*conversion table ROM 22*”, “*SRAM differential/convection value conversion table 32 and 42*”) [figs. 1 and 3] for generating achievable gray scale level data for input image data after a lapse of one vertical display period of the liquid crystal display panel [par. (0043) lines 7-17] (note that the values in the tables 32 and 42 are loaded or outputted after a lapse of one vertical display period since the values to be outputted or loaded are determined or selected based on the previous input image data and the current input image data, and the previous input image data and the current input image data are determined after a lapse of one vertical display period), in accordance with, at least, a combination of gray scale level transitions from one vertical display period to the next [figs. 4 and 5]; and

a temperature detector (“*temperature sensor 24*”) [fig. 1] for detecting a device interior temperature [par. (0096) lines 3-4],

wherein the achievable gray scale level determining section (a combination of “*conversion table ROM 22*”, “*SRAM differential/convection value conversion table 32 and 42*”) [figs. 1 and 3] has an achievable gray scale level table memory (“*conversion table ROM 22*”) [fig. 1] for a plurality of device interior temperatures [par. (0043) lines 12-16, note that selecting most suitable table data from the memory based on the detected temperature indicates that the memory has a plurality of table data for a plurality of detected temperatures),

wherein the achievable gray scale level table memory (“*conversion table ROM 22*”) [fig. 1] stores achievable gray scale level parameters, each representing achievable gray scale brightness after the lapse

Art Unit: 2629

of one vertical display period of the liquid crystal display panel (the values stored in the ROM 22 is used after a lapse of a previous vertical display period), obtained from the optical response characteristics of the liquid crystal display panel,

wherein the write-gray scale level determining section (a combination of “*interpolation calculation units 34 and 44*” and “*post drive level calculation units 36 and 46*”) [fig. 3] determines the write-gray scale level data to be supplied to the liquid crystal display panel, based on achievable gray scale level data of the liquid crystal display panel [par. (0053) lines 11-17], corresponding to input image data at the previous vertical display period, output from the achievable gray scale level determining section and the input image data at the current vertical display period, and

wherein the achievable gray scale level determining section (a combination of “*conversion table ROM 22*”, “*SRAM differential/convection value conversion table 32 and 42*”) [figs. 1 and 3], selects, from the achievable gray scale level table memory (“*conversion table ROM 22*”), an achievable gray scale level table memory part for the detected device interior temperature, and determines the achievable gray scale level data by referring to the selected achievable gray scale level table memory part [par. (0043) lines 7-16].

Suzuki teaches an achievable gray scale level table memory for a plurality of detected temperatures, as discussed above.

Suzuki does not teach a plurality of achievable gray scale level table memories for a plurality of detected temperatures.

However, the courts have held that separating a single part (the achievable gray scale level table memory for a plurality of detected temperatures) into a plurality of separated parts (a plurality of achievable gray scale level table memories for a plurality of detected temperatures) is generally recognized as being within the level of ordinary skill in the art. *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use either a single memory with a large capacity to store parameters representing achievable gray scale level brightness for a plurality of detected temperatures or a plurality of memories with a small capacity to store the parameters since both of the single memory with a large capacity and the plurality of memories with a small capacity would perform equally well at storing the parameters representing achievable gray scale level brightness for a plurality of detected temperatures.

As to **claim 7**, Suzuki as modified above teaches that the achievable gray scale level parameters [figs. 4 and 5] (note that the tables shown on figs. 4 and 5 are loaded from the ROM 22) [fig. 1] stored in each of the plurality of achievable gray scale level table memories are achievable gray scale level parameters for a representative gray scale level transition pattern of every representative gray scale level distributed evenly or unevenly.

Allowable Subject Matter

6. **Claims 6 and 9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH**

Art Unit: 2629

shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (572) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 9, 2007

- s.m.



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER